

REMARKS

Claims 1-14 are pending in this application. At the outset, Applicants wish to thank the Examiner for the courtesies extended during the Interview held May 31, 2006. At that interview was discussed various routes for obtaining allowance of the claims.

By this Amendment, claims 4-6, and 8-12 have been canceled without prejudice or disclaimer. Claims 1 and 7 have been amended to more particularly point out and claim Applicants' invention. No new matter has been added as a result of this Amendment.

Claim Rejections

Rejections Under 35 U.S.C. § 102/103

A. Response to rejection of claims 1-8 and 12-14 under 35 U.S.C. 103(a) as being unpatentable over Kawasaki et al.

In response to the rejection of claims 1-8 and 12-14 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,723,794 of Kawasaki et al. ("Kawasaki"), Applicants submit that a *prima facie* case of obviousness has not been made out and that in any event unexpected results have been demonstrated.

With respect to the alternate rejection under §103, in order to establish a *prima facie* case of obviousness, the Examiner must establish all three of the following essential criteria: (1) the cited reference must teach or suggest each of the claimed elements (MPEP §2143.03); (2) there must be a motivation in the cited prior art to modify the reference as suggested by the Examiner (MPEP §2143.01); and (3) the cited reference must provide a basis for a reasonable expectation for success (MPEP 2143.02). The motivation to modify and the reasonable expectation for success must come from the cited prior art and not the Applicants' specification. Further, it is not enough that a reference can be modified absent a suggestion in the cited prior art to undertake such modification (MPEP §2143.01).

Kawasaki does not teach all the elements of the present invention. As acknowledged by the Examiner, Kawasaki does not teach the use of catalyst compounds in a process for making ethylene/ α -olefin polymers as in the present subject matter. Moreover, despite the large numbers of metallocene compounds cited in the reference, there is no suggestion to modify Kawasaki's disclosure to arrive at the use of a particular class of metallocene compounds in a process to

produce a class of ethylene copolymers as recited in the present claims. Nor would there be any reasonable expectation of success in making such a modification. Therefore, none of the elements of a *prima facie* case of obviousness has been made out.

However, even if a *prima facie* case of obviousness had been made out, Applicants have overcome such a case. As noted by the Examiner, the reference includes $\text{Me}_2\text{Si}(\text{2-Me-4-Ph-indenyl})_2\text{ZrCl}_2$ in ethylene copolymerization. However, this is the compound shown in the specification as compound C1 in the comparative examples. Table 1 clearly demonstrates unexpected positive results with respect to comonomer incorporation ability using the recited metallocene compounds in the process of the present subject matter relative to the C1 compound.

Reconsideration and withdrawal of the rejection respectfully is requested.

B. Response to rejection of claims 1, 3-8, and 12-14 under 35 U.S.C. 103(a) as being unpatentable over Bingel et al.

In response to the rejection of claims 1, 3-8 and 12-14 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,492,539 of Bingel et al. ("Bingel"), Applicants submit that a *prima facie* case of obviousness has not been made out and that in any event unexpected results have been demonstrated.

Bingel does not teach all the elements of the present invention. As acknowledged by the Examiner, Bingel does not teach the use of catalyst compounds in a process for making ethylene/ α -olefin polymers as in the present subject matter. However, in addition, despite the large number of metallocene compounds in the reference, there is no suggestion to modify the Bingel's teaching to arrive at the use of a particular class of metallocene compounds in a process to produce the class of ethylene copolymers as recited in the present claims. Nor would there be any reasonable expectation of success in making such a modification. Therefore, none of the elements of a *prima facie* case of obviousness has been made out.

However, even if a *prima facie* case of obviousness had been made out, Applicants have overcome such a case by demonstrating unexpected positive results with respect to comonomer incorporation ability, as shown in Table 1 of the specification.

Reconsideration and withdrawal of the rejection respectfully is requested.

C. Response to rejection of claims 1, 3, 9, 13, and 14 under 35 U.S.C. 103(a) as being unpatentable over Burkhardt et al.

In response to the rejection of claims 1, 3, 9, 13, and 14 as being unpatentable over U.S. Patent No. 6,376,407 of Burkhardt et al. ("Burkhardt"), Applicants submit that a *prima facie* case of obviousness has not been made out and that in any event unexpected results have been demonstrated.

Burkhardt does not teach all the elements of the present subject matter. As acknowledged by the Examiner, there are no examples showing the manufacture of copolymers of ethylene and higher α -olefins using $\text{Me}_2\text{Si}(2\text{-Me-4}(3,5\text{-}i\text{-Bu}_2\text{-phenyl})\text{indenyl})_2\text{ZrCl}_2$. Moreover, with respect to this metallocene compound cited by the Examiner, the phenyl group substituting the indenyl group in the cited compound is itself a di-substituted moiety, not substituted at all in position number four. In addition, one skilled in the art would find no motivation to modify the reference to arrive at the present invention; nor would there be any reasonable expectation of success in making such a modification. Therefore, none of the elements of a *prima facie* case of obviousness has been made out.

However, even if a *prima facie* case of obviousness had been made out, Applicants have overcome such a case by demonstrating unexpected results with respect to comonomer incorporation ability as shown in Table 1 of the specification.

Reconsideration and withdrawal of the rejection respectfully is requested.

D. Response to rejection of claims 1, 3, 10, 11, 13, and 14 under 35 U.S.C. 103(a) as being unpatentable over Kuber et al.

In response to the rejection of claims 1, 3, 10, 11, 13, and 14 as being unpatentable over U.S. Patent No. 5,840,947 of Kuber et al. ("Kuber"), Applicants submit that a *prima facie* case of obviousness has not been made out and that in any event unexpected results have been demonstrated..

Kuber does not teach all the elements of the present subject matter. As acknowledged by the Examiner, Kuber does not recite alkyl-substituted derivatives of the metal complexes listed in the Office Action. However, in addition, contrary to the present subject matter, the compounds recited in the Office Action are substituted at the number four position of the indenyl group with heteroatom-containing moieties. Moreover, one skilled in the art would find no motivation to

modify the reference to arrive at the present invention; nor would there be any reasonable expectation of success in making such a modification. Therefore, none of the elements of a *prima facie* case of obviousness has been made out.

However, even if a *prima facie* case of obviousness had been made out, Applicants have overcome such a case by demonstrating unexpected results with respect to comonomer incorporation ability as shown in Table 1 of the specification.

Reconsideration and withdrawal of the rejection respectfully is requested.

Applicants respectfully request that a timely Notice of Allowance be issued in this case. Should the Examiner have questions or comments regarding this application or this Amendment, Applicant's attorney would welcome the opportunity to discuss the case with the Examiner.

The Commissioner is hereby authorized to charge U.S. PTO Deposit Account 08-2336 in the amount of any fee required for consideration of this Amendment.

This is intended to be a complete response to the Office Action mailed March 30, 2006.

Respectfully submitted,

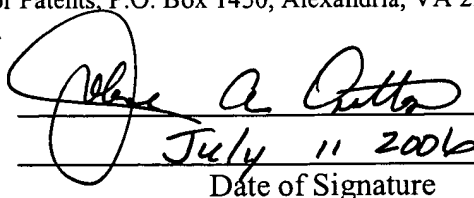


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I hereby certify that this correspondence is being deposited with sufficient postage thereon with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on July 11, 2006.


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